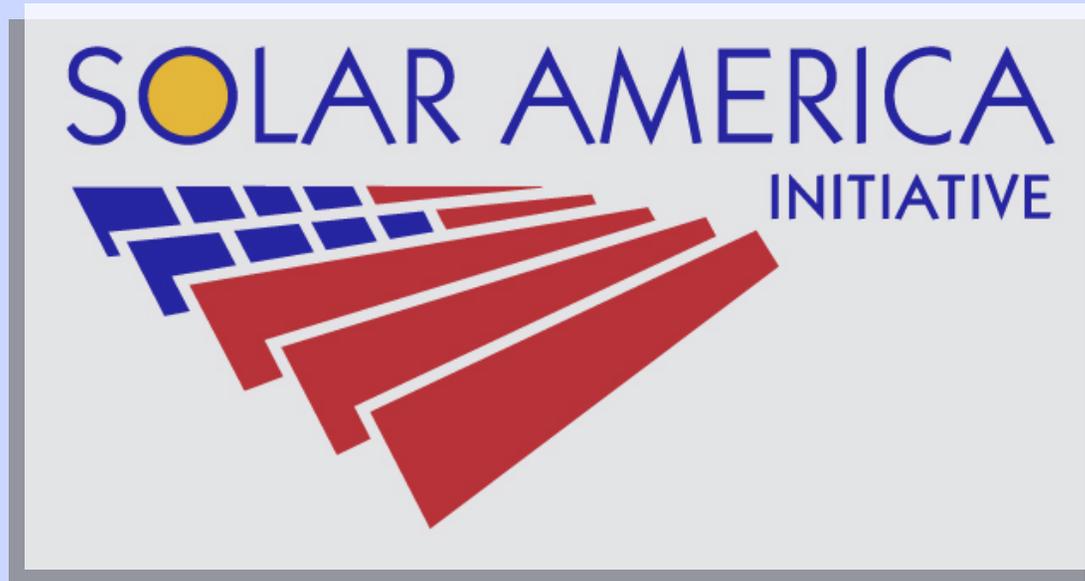




U.S. Department of Energy  
Energy Efficiency and Renewable Energy

# Solar America Initiative

*Application Content and Merit  
Review Process Breakout*





# Breakout Session Agenda

- Introduction of Facilitator/Scribe
- Breakout group introductions: name and organization
- Session setup/ground rules
  - Purpose
  - Non-purpose
- Overview presentation of topic
- ID representative for report-out
- Discuss questions
- Summarize



# Purpose of Breakout Session

- Discussion of critical issues that will have a significant impact on the structure of the initiative and the resulting solicitation.

## Session Non-Purpose: Topics not discussed or debated:

- Specific answers to questions posed by participants
- Provide information on the DOE procurement process
- DOE Solar budget or current program structure
- DOE Administration policy decisions
- Proprietary corporate or organizational information
- Sales or marketing speeches for participants' companies
- Present unverified technical data or assertions



# Application Content Requirement *Outline*

1. Statement of Objectives-Technical Plan and Integrated Systems Approach
2. Implementation/Project Management Plan
3. Qualifications and Resources
4. Business Plan



# Application Content Requirements

## ***1. Statement of Objectives-Technical Plan and Integrated Systems Approach***

- Identification of targeted product applications and supporting market analysis
- System requirements analysis projections for proposed PV system designs (including LCOE) and an associated product R&D roadmap
- Manufacturing roadmap and a supply chain management approach



# Benchmarked and Projected Performance Data Required in Application

- Array orientation
  - Fixed, 1-axis, or 2-axis tracking
- Performance
  - Module
    - Single-point efficiency with temperature coefficient or
    - Existing measured data from Sandia
  - Inverter
    - Single-point efficiency or
    - Fitted performance curve – e.g. measured at Sandia
  - System
    - Number and size of modules and inverter
    - System derate factor (module mismatch and other losses)
    - System degradation (%/year)

***Values for these high-level parameters will require detailed substantiation in the application***



# Application Content Requirements

## *2. Implementation/Project Management Plan*

Within TIO-based work breakdown structure, includes:

- Detailed description of technical activities
- Organization assignments
- Key technical milestones
- Stage-gate commitments
- Deliverables
- Resource-loaded, integrated master schedule



# Application Content Requirements

## ***3. Qualifications and Resources***

- Description of team's technical capability to conduct R&D and engineering
- Key personnel
- Facilities, and equipment to be employed
- Information about relevant past performance and current business operations



# Application Content Requirements

## 4. *Business Plan*

- Plan that describes how the team's cooperating membership will manufacture, integrate, distribute, market, and deploy systems in the commercial market place
- Include a supply chain analysis and bill of materials that address major component manufacturing costs, material feedstock availability, acquisition of purchased-in components and other operational factors
- Markets to be addressed with analysis



# Benchmarked and Projected Cost Data Required in Application

- Module price (\$/unit)
- Inverter price (\$/unit)
- BOS price (\$'s) for defined system
- Installation price (\$'s) for defined system
- Indirect/other not in above prices for defined system (\$'s)
  - Intended to capture all other initial expenses such as permitting, interconnection, marketing
- Annual O&M expenses (\$'s)
  - Can be input as a spreadsheet of future expenses
  - Includes required site and system maintenance, repairs, monitoring, taxes, insurance...

***Values for these high-level parameters will require detailed substantiation in the application***



# Merit Review Criteria and Weighting

## ***1. Statement of Objectives (Weight-35 %)***

- Technical feasibility of product R&D roadmap.
- Extent to which proposed manufacturing process development roadmap and supply chain management approach demonstrate viable trajectory to business model to achieve SAI cost goals.
- Comprehensiveness and accuracy of market analysis and extent to which targeted product applications and system performance parameters align with market opportunities.
- Degree to which proposed product and process development approach demonstrates a clear understanding and application of the SETP's Systems-Driven Approach (SDA) and Technical Improvement Opportunities (TIO) framework.
- Quality, completeness and perceived value of proposed approach in achieving goals /objectives of SAI.



# Merit Review Criteria and Weighting

## ***2. Team Structure (Weight – 25%)***

- Degree to which plan is clear and well-organized in responding to the FOA objectives
- Extent to which proposed tasks are adequate and complete in meeting proposed objectives and the clarity and thoroughness in which those tasks are described, as well as the feasibility of completing tasks in time scheduled.
- Adequacy, value and reasonableness of schedule and technical quality of critical path planning including proposed milestones, stage-gates, performance metrics, decision points, etc.
- Extent to which proposed management and performance controls demonstrate adequate ability to mitigate potential project issues and risks.
- Viability, completeness and adequacy of proposed project lifecycle budgeted resources and cost profile.



# Merit Review Criteria and Weighting

## ***3. Qualifications and Resources (Weight – 20%)***

- Capabilities, experience, qualifications, and credentials of Key Personnel, as well as adequacy of resources and infrastructure.
- Soundness of organization's structure and capabilities to achieve project objectives within SETP's SDA/TIO framework.
- Adequacy of infrastructure and resources proposed to support achievement of project objectives, including subrecipients and/or other partners.
- Extent to which each team member with responsibility for manufacturing components has either current production capabilities or capability to scale up production consistent with meeting FOA goals/objectives
- Reasonableness of any request for proposed new facilities and perceived value added to achievement of objectives in FOA.



# Merit Review Criteria and Weighting

## ***4. Business Plan- (Weight-20%)***

- Accuracy and incisiveness of market analysis in relation to target system parameters.
- Competitive position of proposed system in market(s) being addressed.
- Viability of sales and marketing strategy to achieve threshold production volumes necessary to overcome barriers identified in the PMP.
- Technical and financial viability of manufacturing scale-up plan, including plans for management of key environmental, safety & health (ES&H) issues
- Feasibility of projected system cost reduction within business operations context and reference bill of materials (BOM).
- Viability of systems supply chain management approach, including product distribution and any product lifecycle management issues (e.g. system disposal).
- Robustness of teaming structure and plan for team operations.
- Feasibility of pro forma cash flow projections.



U.S. Department of Energy  
Energy Efficiency and Renewable Energy



# Select Representative for Report-Out



- Will the application content requirements allow your technology to be well represented
  - Application content clearly defined?
  - What is the appropriate level of detail for the technical project plan?  
Week by week? Monthly? Subcomponent? Component? System?
- Is the requested level of detail for manufacturing cost breakdown a feasible level of detail to provide?
  - Are there any issues associated with the level of detail needed for SAM input requirements?
- Are the Merit Review Criteria appropriate for allowing reviewers to adequately assess a proposed effort?
  - Are the categories sufficient and appropriate?
  - Are the weighting proportions appropriate?
- Would you be capable of and/or willing to submit a full Partnership business plan with all the details cited? Will such a plan add value to R&D planning and management?



- **Based on what you have heard up to this point, what concerns/recommendations do you have concerning the time necessary to prepare the applications**
- **Typically, FOA Applications limit the Narrative Description to address the Technical Requirements to no more than 25-30 pages. For this proposed FOA, can an Applicant adequately cover the requested information within these page limitations? (Does not include resumes, certain other supporting documentation)**